IN THE SPECIFICATION

1. Please amend paragraphs [0011]-[0014] as follows:

[0011] As free barium plays the role of an electron donor, the cathode oxide physically becomes an n-type semiconductor during the operation of the cathode. In general, when a large amount of current flows in a semiconductor, Joule heat is generated due to [[its]] the semi C's own resistance. If the generation of Joule heat lasts for a long period, raw material evaporates or melts by self-heating, which thus deteriorates the cathode. Thus, when the conventional cathode oxide is used at a high current density to increase the electron emission density, the cathode may ~~be deteriorated~~ deteriorate due to Joule heat, which abruptly shortens the cathode's lifespan.

[0012] Meanwhile, as shown in the reaction equations (2) and (3), during free barium production, in addition to free barium, byproducts such as MgO, Ba_2SiO_4, *etc.* are produced. These ~~kinds of~~ byproducts accumulate to form an interlayer at the interface between the electron-emitting material layer and the metal base, which acts as a diffusion barrier of reducing [[agent]] agents such as Mg, Si, *etc.* As a result, the production of free barium is suppressed, resulting in a shortening of the cathode's life span. Moreover, since the interlayer has a high resistance, it disturbs the flow of the electron emissive current, limiting the current density of the cathode.

[0013] Along with popular trends toward high definition and larger screens for televisions or monitors using cathode-ray tubes, there has been an increasing need for cathodes with high current densities and longer life [[span]] spans. However, earlier oxide cathodes are

not capable of satisfying this need due to the aforementioned disadvantages ~~with respect to~~ in performance and shortened life span.

[0014] An impregnated cathode is known for its high current density and long life span, but the manufacturing process thereof is complex and its operating temperature is approximately 1000 degrees Celsius, which is higher than that of oxide cathodes. Thus, an impregnated cathode needs to be made of expensive material with a much higher melting point, and its practical use is impeded.

2. Please amend paragraph [0065] as follows:

[0065] Carbonaceous material such as carbon nanotube is preferably used in an embodiment of the present invention. The carbonaceous material is advantageously used from the ~~viewpoints~~ viewpoint of its stable structure at high temperature and a high ratio of length to diameter (*i.e.*, its aspect ratio).

3. Please amend paragraph [0109] as follows:

[0109] The initial emission characteristic is measured to evaluate the defectiveness or electron emission capability of a cathode of an electron gun immediately after an electron tube is fabricated, and is generally evaluated by measuring emission current from the cathode at a heater operating voltage of 6.3 V (volts) when predetermined voltages are applied to the cathode and electron gun grids. FIG. 11 illustrates initial emission characteristics (initial emission current in micro-amperes) of cathodes prepared in the Examples of the present

invention and the Comparative Examples. Referring to FIG. 11, the cathodes for an electron tube according to the present invention, containing a smaller amount of conductive material than the conventional cathode in Comparative Example 2, showed improved lifespan and initial emission characteristics compared to the conventional cathode in Comparative Example 2.